

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q79492

Stanislas BOURDEAUT

Appln. No.: 10/765,133

Group Art Unit: 2617

Confirmation No.: 3585

Examiner: Christopher M. BRANDT

Filed: January 28, 2004

For: A METHOD OF IMPLEMENTING DIFFERENT TRANSFER MODES A MOBILE
RADIO SYSTEM

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

Based on the information supplied by Appellants, and to Appellants legal representatives' knowledge, the real party in interest is the assignee, Evolium S.A.S. The Assignment in this case was recorded on July 16, 2004, at Reel 015574, Frame 0175.

II. RELATED APPEALS AND INTERFERENCES

To the best of their knowledge, there are no other related Appeals or Interferences known to Appellants, Appellants' legal representative or the assignee that will directly affect, be affected by, or have a bearing on the Board's decision in the instant appeal.

III. STATUS OF CLAIMS

Claims 1 and 4-11 are all the claims pending in the present application. Claims 1 and 4-11 have been finally rejected and are the subject of this appeal. The pending claims are set forth in the Appendix.

IV. STATUS OF AMENDMENTS

No claim amendments were submitted subsequent to the Final Office Action dated
January 22, 2010.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

An exemplary embodiment of the present invention is directed to a method of optimizing the performance of a mobile radio system. The method includes: a Radio Link Control RLC transmitter receiving acknowledgement/non-acknowledgement ACK/NACK messages transmitted by a RLC receiver, wherein the messages include a Start Sequence Number SSN and a Received Block Bitmap RRB (*page 7, lines 33-37*); and in a transfer mode corresponding to Enhanced General Packet Radio Service EGPRS, the RLC transmitter takes into account SSN and RRB information transmitted in a non-acknowledged mode (*page 8, lines 12-15; page 6, lines 15-21*). *See, e.g., claim 1.*

Another exemplary embodiment of the present invention is directed to a mobile station including: a radio link control (RLC) transmitter which receives acknowledgement/non-acknowledgement (ACK/NACK) messages transmitted by an RLC receiver, the messages include a start sequence number (SSN) and a received block bitmap (RRB) (*page 7, lines 33-37*); and said RLC transmitter, in a transfer mode corresponding to Enhanced General Packet Radio Service (EGPRS), takes into account SSN and RRB information transmitted in a non-acknowledged mode (*page 8, lines 12-15; page 6, lines 15-21*). *See, e.g., claim 10.*

Yet another exemplary embodiment is directed to a mobile radiocommunication network equipment comprising: a radio link control (RLC) transmitter which receives acknowledgement/non-acknowledgement (ACK/NACK) messages transmitted by an RLC receiver, said messages comprising a start sequence number (SSN) and a received block bitmap (RRB) (*page 7, lines 33-37*); and the RLC transmitter, in a transfer mode corresponding to Enhanced General Packet Radio Service (EGPRS), takes into account SSN and RRB information

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transmitted in a non-acknowledged mode (*page 8, lines 12-15; page 6, lines 15-21*). *See, e.g., claim 11.*

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1, 4 and 6-9 stand rejected under 35 USC §103(a) as allegedly being unpatentable over Hunzinger et al. (US PG PUB 2002/0172192 A1, hereinafter “Hunzinger”) in view of Leppisaari et al. (WO 01/20924 A1, hereinafter “Leppisaari”), and further in view of Puharinen (8309700 Advanced Topics in Telecommunications).

2. Claim 5 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Hunzinger in view of Leppisaari, in view of Puharinen, and further in view of Balachandran et al. (US Patent 6,567,375 B2; hereinafter “Balachandran”).

3. Claims 10 and 11 stand rejected under 35 USC 102(b) as allegedly being anticipated by Leppisaari.

VII. ARGUMENT

- A. Neither Hunzinger nor Leppisaari, alone or in combination, renders the claimed invention, as recited in claims 1, 4, and 6-9, unpatentable under 35 U.S.C. § 103(a).**

Independent claim 1 recites:

A method of optimizing the performance of a mobile radio system, said method comprising:

- a Radio Link Control RLC transmitter receiving acknowledgement/non-acknowledgement ACK/NACK messages transmitted by a RLC receiver, said messages comprising a Start Sequence Number SSN and a Received Block Bitmap RRB; and
- in a transfer mode corresponding to Enhanced General Packet Radio Service EGPRS, said RLC transmitter taking into account SSN and RRB information transmitted in a non-acknowledged mode.

Appellant submits that the prior art does not disclose or suggest *at least*, “a Radio Link Control RLC transmitter receiving acknowledgement/non-acknowledgement ACK/NACK messages transmitted by a RLC receiver, said messages comprising a Start Sequence Number SSN and a Received Block Bitmap RRB; and in a transfer mode corresponding to Enhanced General Packet Radio Service EGPRS, said RLC transmitter taking into account SSN and RRB information transmitted in a non-acknowledged mode,” as recited in independent claim 1.

In the Office Action dated January 22, 2010, the Examiner alleges, in part:

With regard to applicant's argument that Hunzinger and Leppisaari fail to disclose or suggest wherein said transfer modes include the General Packet Radio Service (GPRS) mode and the Enhanced General Packet Radio Service (EGPRS) mode, the examiner respectfully disagrees. Hunzinger teaches different transfer modes when Hunzinger is discussing different data rates (paragraph 109). Leppisaari teaches that the invention is suitable for use in EGPRS (Enhanced GPRS), which is built on GPRS (page 12 lines 36-38). Therefore, Hunzinger and Leppisaari teach that the

mode may include the General Packet Radio Service (GPRS) mode and the Enhanced General Packet Radio Service (EGPRS) mode.

With regard to applicant's argument that Leppisaari fails to teach or suggest a start sequence number (SSN) and a received block bitmap (RRB) in acknowledgement/non-acknowledgment (ACK/NACK) messages, the Examiner respectfully disagrees. In previous communications, the examiner states that Leppisaari discloses that the network can receive the packet channel request sent by the wireless terminal, which comprises the bit pattern, where the bit pattern (i.e. 110101) contains the sequence number (in this case 1) and the received block bitmap (page 9 lines 7-29). As noted in the previous Office Action, this feature is taken directly from the 3GPP Technical Specification TS 44.060, however, Leppisaari also shows this feature with the example given on page 9 lines 7-14 (also see figures 4a and 4b). Therefore, Leppisaari discloses the limitation, "a start sequence number (SSN) and a received block bitmap (RRB) in acknowledgement/non-acknowledgment (ACK/NACK) messages."

In response, Appellant submits that the applied references, including Leppisaari, do not disclose or suggest at least, "a Radio Link Control RLC transmitter receiving acknowledgement/non-acknowledgment ACK/NACK messages transmitted by a RLC receiver, said messages comprising a Start Sequence Number SSN and a Received Block Bitmap RRB; and in a transfer mode corresponding to Enhanced General Packet Radio Service EGPRS, said RLC transmitter taking into account SSN and RRB information transmitted in a non-acknowledged mode," as recited in claim 1. According to Appellants' understanding, Figs. 4A and 4B (on which the Examiner relies) disclose 8 and 11 bit packet channel requests. However, these packet channel requests are not analogous to the claimed acknowledgment/non-acknowledgment messages as set forth in claim 1. An acknowledgement/non-acknowledgment message might be responsive to a packet channel request but clearly is not the same as said packet channel request. Therefore, the Examiner's reliance on Figs. 4A and 4B of Leppisaari as

allegedly satisfying claim 1 is misplaced and does not render the claimed invention obvious over the applied references, alone or in combination.

Yet even further, even given the "broadest reasonable interpretation" of the term "ACK (acknowledgement information)", on which the Examiner's interpretation of the applied art seems to be based, Appellant respectfully submits that such interpretation is not acceptable, i.e. the information described in Leppisaari cannot correspond the ACK/NACK messages recited in the claims, at least based on the following additional reason. Information sent in response to the reception of a resource allocation request as described in Leppisaari cannot correspond to ACK/NACK messages exchanged between a RLC (Radio Link Control) transmitter and a RLC receiver as described in the claims. Information sent in response to the reception of a resource allocation request (as described in Leppisaari) is sent according to MAC protocol, whereas ACK/NACK messages exchanged between a RLC (Radio Link Control) transmitter and a RLC receiver (as stated in the claims) are sent according to the RLC protocol, which is very different from the MAC protocol (see, for example, a disclosure of the distinction between these two protocols at page 3 line 36 to page 4 line 5 of Leppisaari). In particular MAC does not, contrary to RLC protocol, include any ACK/NACK mechanism as described in the claims.

In view of the foregoing, Appellants submit that claim 1 should be patentable.

Claims 4 and 6-9 are patentable at least based on of their dependency on claim 1.

- B. Neither Hunzinger, Leppisaari, nor Puharinen, alone or in combination, renders the claimed invention, as recited in claim 3, unpatentable under 35 U.S.C. § 103(a).**

Claim 3 should be patentable at least because of its dependency from claim 1, and because Puharinen fails to cure the noted deficiencies of Hunzinger and Leppisaari with respect to claim 1.

- C. Neither Hunzinger, Leppisaari, nor Balachandran, alone or in combination, renders the claimed invention, as recited in claim 5, unpatentable under 35 U.S.C. § 103(a).**

Claim 5 should be patentable at least because of its dependency from claim 1, and because Balachandran fails to cure the noted deficiencies of Hunzinger and Leppisaari with respect to claim 1.

- D. Leppisaari does not anticipate claims 10 and 11 under 35 U.S.C. § 102(b).**

With regard to claim 10, first, Appellant submits that this claim is patentable at least based on the reasons set forth above with respect to claim 1.

Further, Appellant submits that Leppisaari fails to teach or suggest each feature of claim 10. For example, claim 10 describes a start sequence number (SSN) and a received block bitmap (RRB) in acknowledgement/non-acknowledgement (ACK/NACK) messages.

The Examiner relies upon the packet channel requests as allegedly disclosing the SSN and the RRB in ACK/NACK messages, as described in claim 10. Appellant respectfully disagrees.

The packet channel requests are requests between the wireless terminal and the network for allocation of real-time data transmission resources, such as allocation of channels. SSN and

RRB in ACK/NACK messages help the transmitter to determine which block of data is received, with or without error. Packet channel requests, and SSN and RRB in ACK/NACK messages serve different functions. Therefore, packet channel requests in Leppisaari do not correspond to the SSN and RRB in ACK/NACK messages, as described in claim 10.

In view of the foregoing, Appellant respectfully submits that claim 10 is patentable. Claim 11 is patentable because it includes features that are similar to those of claim 10.

Conclusion

In summary, at least based on the foregoing, Appellant submits that the Examiner has not demonstrated that each and every feature of the claimed invention, as set forth in claims 1 and 4-11, is taught and/or suggested by the applied references, alone or in combination. Therefore, Appellant submit that claims 1 and 4-11 are patentably distinguishable over the applied art.

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: February 8, 2011

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CLAIMS APPENDIX

CLAIMS 1 and 4-11 ON APPEAL:

1. A method of optimizing the performance of a mobile radio system, said method comprising:

- a Radio Link Control RLC transmitter receiving acknowledgement/non-acknowledgement ACK/NACK messages transmitted by a RLC receiver, said messages comprising a Start Sequence Number SSN and a Received Block Bitmap RRB; and

- in a transfer mode corresponding to Enhanced General Packet Radio Service EGPRS, said RLC transmitter taking into account SSN and RRB information transmitted in a non-acknowledged mode.

2-3. (canceled).

4. A method according to claim 1, wherein acknowledgment information is taken into account by an RLC sender to estimate transmission quality.

5. A method according to claim 4, wherein said transmission quality estimate is used for radio link adaptation.

6. A mobile station including means for implementing a method according to claim 1.

7. Mobile radio network equipment, including means for implementing a method according to claim 1.

8. A mobile radio system including means for implementing a method according to claim 1.

9. A method of claim 1, wherein the non-acknowledged mode is General Packet Radio Service (GPRS) mode or Temporary Block Flow (TBF) mode.

10. A mobile station comprising:
a radio link control (RLC) transmitter which receives acknowledgement/non-acknowledgement (ACK/NACK) messages transmitted by an RLC receiver, said messages comprising a start sequence number (SSN) and a received block bitmap (RRB); and said RLC transmitter, in a transfer mode corresponding to Enhanced General Packet Radio Service (EGPRS), taking into account SSN and RRB information transmitted in a non-acknowledged mode.

11. A mobile radiocommunication network equipment comprising:
a radio link control (RLC) transmitter which receives acknowledgement/non-acknowledgement (ACK/NACK) messages transmitted by an RLC receiver, said messages comprising a start sequence number (SSN) and a received block bitmap (RRB); and

said RLC transmitter, in a transfer mode corresponding to Enhanced General Packet Radio Service (EGPRS), taking into account SSN and RRB information transmitted in a non-acknowledged mode.

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EVIDENCE APPENDIX:

NONE.

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RELATED PROCEEDINGS APPENDIX

NONE.

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Sir:

Submitted herewith please find an Appeal Brief. The USPTO is directed and authorized to charge the statutory fee of \$540.00 and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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